

Title (en)  
SYRINGE BARREL PRODUCTION METHOD

Title (de)  
SPRITZENZYLINDERHERSTELLUNGSVERFAHREN

Title (fr)  
PROCÉDÉ DE PRODUCTION D'UN CORPS DE SERINGUE

Publication  
**EP 3106283 A4 20171004 (EN)**

Application  
**EP 15746273 A 20150209**

Priority  
• JP 2014023104 A 20140210  
• JP 2014132140 A 20140627  
• JP 2015053566 W 20150209

Abstract (en)  
[origin: US2016325045A1] The present invention provides a manufacturing method of a syringe barrel capable of securing smoothness of a nozzle tip and productivity. A manufacturing method of a syringe barrel that is injection-molded from a nozzle tip comprises cutting a remaining gate at a nozzle part using an ultrasonic cutting apparatus having a mechanism for suppressing abnormal vibrations.

IPC 8 full level  
**B29C 45/17** (2006.01); **A61M 5/178** (2006.01); **B26D 7/08** (2006.01); **B29C 45/38** (2006.01); **B29C 45/16** (2006.01); **B29K 23/00** (2006.01); **B29L 31/00** (2006.01)

CPC (source: EP KR US)  
**A61M 5/178** (2013.01 - KR); **A61M 5/31** (2013.01 - US); **A61M 5/3129** (2013.01 - EP US); **B26D 3/00** (2013.01 - EP KR US); **B26D 7/08** (2013.01 - EP US); **B26D 7/086** (2013.01 - EP KR US); **B29C 45/0025** (2013.01 - EP KR US); **B29C 45/38** (2013.01 - EP KR US); **A61M 2205/02** (2013.01 - EP US); **A61M 2207/00** (2013.01 - EP US); **B29C 45/16** (2013.01 - EP US); **B29C 2045/0027** (2013.01 - EP KR US); **B29C 2793/009** (2013.01 - EP KR US); **B29K 2023/38** (2013.01 - EP KR US); **B29L 2031/7544** (2013.01 - EP KR US)

Citation (search report)  
• [Y] JP 2004229750 A 20040819 - NIPRO CORP  
• [Y] US 4685602 A 19870811 - HAMA TOMIO [JP]  
• See references of WO 2015119284A1

Cited by  
CN112789143A; EP3862153A4

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)  
**US 10220150 B2 20190305; US 2016325045 A1 20161110**; CN 105873741 A 20160817; CN 105873741 B 20180515; EP 3106283 A1 20161221; EP 3106283 A4 20171004; EP 3106283 B1 20180912; JP 6447832 B2 20190109; JP WO2015119284 A1 20170330; KR 102348201 B1 20220110; KR 20160120715 A 20161018; TW 201538191 A 20151016; TW I643645 B 20181211; WO 2015119284 A1 20150813

DOCDB simple family (application)  
**US 201515107605 A 20150209**; CN 201580003508 A 20150209; EP 15746273 A 20150209; JP 2015053566 W 20150209; JP 2015561243 A 20150209; KR 20167017002 A 20150209; TW 104104426 A 20150210